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Capital Access in El Paso: A Multivariate Analysis of Factors Influencing Loan Approval

CAPITAL ACCESS IN EL PASO:
A MULTIVARIATE ANALYSIS OF FACTORS INFLUENCING LOAN APPROVAL

SPECIAL REPORT
FOR
EL PASO LEADERSHIP AND RESEARCH COUNCIL

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CAPITAL ACCESS IN EL PASO:
A MULTIVARIATE ANALYSIS OF
FACTORS INFLUENCING LOAN APPROVAL

EXECUTIVE SUMMARY

During the spring of 2000, The University of Texas at El Paso was commissioned by the El Paso Leadership and Research Council to explore a broad set of issues surrounding supply and demand factors with respect to commercial banks, small business firms and debt financing. The study revealed among other things that small, relatively young and minority owned firms experience high loan denial rates compared to their counterparts. The present study has the purpose of providing a more comprehensive statistical analysis concerning the factors which influence or predict loan approval probabilities.

After a review of a typical bank's lending decision process and the nature of the 2000 UTEP database, this project employed the multivariate statistical analysis technique, binary logistic regression (BLR), to identify the individual and collective roles of the following variables concerning their influence on loan approval/denial rates: nature of the firm's financial record keeping system; the size, age, and legal structure of the firm; the industry the firm is in; it's geographical location; and the gender/race/ ethnicity of the majority owner.

The BLR technique was implemented and estimated 23 equations evaluating the "predictors" noted above. Key findings were as follows:

-A firm utilizing an accounting system capable of providing key information to a prospective lender plays a critical role in determining the probability of loan approval.

-No evidence was uncovered to support hypotheses of gender, race/ethnicity, or geographical location discrimination.

-The nature of a firm's business (for example, retail or manufacturing) has no significant effect upon loan application accept/reject probabilities.

-When other predictor factors are allowed for, relatively young firms reveal a tendency towards higher loan approval odds.

-Interpreting the results of the BLR analysis indicates that two highly correlated factors, "size of firm" and "legal structure of firm" impact the chances of loan approval. Specifically, firms with annual revenues below $100 thousand and sole proprietorships face lower loan approval probabilities. At the same time, inclusion of these variables, or any others, adds little if any predictive power over-and-above a simple BLR model with the firm's accounting system and a "constant" (measuring all other factors not analyzed explicitly) as predictors of loan acceptance.

CAPITAL ACCESS IN EL PASO:
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INTRODUCTION

The financial sector and its institutions have an important role in promoting growth in an economic system. By facilitating the transfer of funds from surplus income units to deficit spending units, financial intermediaries foster continued expansion and development of the economic system they serve. Clearly, commercial banks have traditionally played a significant role in this process. For most of us, banks are the primary financial entity we think of when we consider financial matters, whether personal or business-related. However, the continuing wave of bank mergers and acquisitions has raised concern about the availability of debt capital, especially to small business firms. Nowhere is this issue more hotly debated than in the southern border region of the United States, where small firms dominate the business sector. Further, a significant portion of these entities are minority owned.

The issue of access to debt capital in the Texas-Mexico border region came to the forefront in the summer of 1999 as a result of an award-winning study by the Community Scholars; a group of pre-college students commissioned to study issues of regional concern. In response to the questions brought forth by this study, The University of Texas (UTEP) was commissioned to do a follow-up to the report and explore a greater set of issues on both banking and its commercial lending practices, as well as the business sector and its need for capital and financial services. Completed in the spring of 2000, the study revealed among other things that small, relatively young, and minority owned firms experienced higher loan denial rates compared to larger, older, and non-minority owned businesses. Specifically, the former experienced denial rates one-and-a-half to more than two times higher than their counterpart groups. At the same time, the 2000 study showed that small, young, and minority owned firms tend to utilize a basic, low-cost accounting system; one which provides only minimal financial information on the firm, at a higher rate than "other" companies. Given this, the UTEP study called for additional research concerning the higher loan denial rates experienced by small, young, and minority owned firms.

The purpose of the present paper is to provide a more comprehensive statistical analysis with respect to the factors which influence or "predict" the approval or denial of a business firm's loan

application. The multivariate statistical analysis technique, binary logistic regression, is utilized to identify the individual and collective roles of the following variables concerning their influence on loan approval/denial rates:

-Nature of financial record keeping system.

-Legal structure of the firm.

-Size of firm.

-Age of firm.

-Type of business.

-Geographical location of firm.

-Gender of majority owner.

-Race/Ethnicity of majority owner.

The last three predictor variables will allow a more detailed analysis concerning possible discrimination practices present in the loan decision-making process of local commercial banks.

The remainder of this report is organized as follows:

-An overview of a bank's lending decision process is provided.

-The methodology employed in the original UTEP study to generate the data base used in the present analysis is detailed. In addition, relevant data from the 2000 UTEP project is reviewed.

-Binary logistic regression analysis is conducted on the variables noted above.

-The final section of the paper offers a summary with concluding thoughts.

THE LENDING DECISION

The fundamentals of economics and finance, government regulation, and fiduciary responsibility to owners require that bankers make a lending decision based upon the credit worthiness of the loan applicant. Traditionally, lenders assess credit risks along the "C's" of credit (for example, see Koch, Rose, Sinkey):

-Capacity: the applicant's legal ability to enter into a loan contract must be established. For example, a minor needs a parent/guardian/co-signer, a partner or corporate officer must have the legal authority to commit their firm to a loan agreement.

-Character: the banker must assess the applicant's willingness and ability to honor the proposed loan arrangement. The past credit history of the individual or firm in general and with the bank in

particular is critical. Bankers continually emphasize the importance of the applicant's **credit history** and their **relationship** with the bank as important factors in evaluating credit worthiness.

-Capital: this category refers to the loan applicant's ability to create income/cash flow. Traditionally, this ability has been measured via financial statement or financial ratio analysis of the individual/firm seeking credit. The key point here is the applicant must provide financial **information** to the lender concerning the firm/individual's past, present and, in some cases, projected financial position. Again, this approach has its foundation in the disciplines of economics and finance. And bank regulations require such an approach.

"Capital" also refers to **human capital**. That is, the abilities, skills, experience and or record of a firm's owners and key managers in: assembling factors of production, generating a flow of quality/competitive goods and services, and in creating cash flow or profits can be a critical factor in assessing the quality of the credit request. Finally, "capital" means the contribution of owners' funds into the firm. The **equity** that owners have in their business can allow the firm to survive difficult, transitory financial conditions. It follows, that if an owners' funds are at a risk in the firm (versus only a lender's funds), owners will have greater incentives to properly manage the firm.

-Conditions: this refers to the economic conditions or environment faced by the applicant (a business firm in this case). The lender must consider competitive conditions, supply/cost factors, changing technology, and prospective demand in forming an opinion concerning the outlook for the industry and market.

"Conditions" also relates to the bank's condition or situation. For example, if the institution's current loan portfolio is relatively large and is experiencing a high level of "past due" accounts and/or "write-off" situations, or if regulators are calling for greater restraint in lending (via public statements, official memos, bank examination procedures/comments, or monetary policy actions of the Federal Reserve), or if the relevant economic outlook is bleak, then sound, prudential financial management requires an adjustment in a bank's lending "stance". The reader should understand that, while such adjustments do occur, it does not happen on a frequent, regular basis.

Collateral: Bank lender's will seek to identify any firm/individual assets which can be offered by the customer as security. While banks do not make loans with the expectation or objective of acquiring the **collateral,** sound risk/return management and bank regulations require that it be considered and, in many cases, held or captured as part of repayment.

In short, a factor central to assessing credit worthiness is information. And, one of the key sources of information to a lending institution is the financial records of the applicant.

THE 2000 UTEP STUDY: METHODOLOGY AND RELEVANT DATA

Methodology

This study had the following objectives with respect to capital access and business lending practices:

-Profile the El Paso business sector with respect to the financial services they utilize along with the sources of these services.

-Identify and rank the opinions of businesses concerning a variety of capital access and other issues faced by firms in the region.

-Generate data and analysis concerning the level of effective demand for debt financing by the business sector in El Paso.

It was determined that a mail survey would be the appropriate vehicle to achieve the objective of understanding the business environment and how financial services are being utilized in El Paso. More specifically, a survey instrument was designed and mailed to companies in El Paso in order to obtain a representative sample of firms. The intent was to obtain a sample that would reflect the experiences and opinions of the local business community. To achieve these goals, an inventory of El Paso business firms was compiled. A variety of vendors offering business mail lists were invited to submit bids concerning the quantity, quality, cost and availability of their databases. Given the proposals, the R. L. Polk business database was acquired, providing an inventory of over 16,900 firms (16,945) in the region. The information was compiled by R. L. Polk during the fourth quarter of 1999 and was made available in January 2000.

This mailing list of firms was refined by:

-Eliminating firms that were listed twice due to multiple listings as a result of spelling, abbreviations and/or initials versus full names, or because of multiple locations. In the case of the latter, regional office or corporate offices, if local, were used.

-Eliminating firms outside of El Paso.

-Removing banks and other depository institutions, government and public administration units, churches, and other not-for-profit organizations.

After these adjustments 13,646 firms remained and provided the compilation of non-government, for-profit firms in El Paso; firms which traditionally require debt capital from financial institutions.

A survey instrument was designed to develop information consistent with the objectives listed earlier. Issues surrounding business firms' ability to access capital is not a new concern nor is it unique to El Paso. In this regard, the survey was designed using previous research in El Paso (Schauer and Sullivan) and the broader research conducted by the Federal Reserve through its 1993 Small Business Survey and its present efforts to replicate that survey within the next year (Board of Governors, 1994 and 1999). This fact allowed the research team to rely upon previous survey instruments developed by the Board of Governors of the Federal Reserve System along with additional surveys conducted at the state and local levels (El Paso Hispanic Chamber and Pinkus). The resulting questionnaire was reviewed by UTEP and the El Paso Leadership Research Council. After minor revisions, the English and Spanish version of the cover letter and instrument were pre-tested by a small group of randomly selected firms. Every effort was made to make the questions as clear as possible, realizing that even under the best circumstances, a lengthy survey

about a complicated issue can become difficult for respondents. The final version of the questionnaire includes three sections (copies of the cover letter and survey instrument, English and Spanish versions are provided in Appendix A):

> Section I. Questions seeking basic information about the firm. Specifically, data concerning a firm's size, age, legal structure, ownership (minority, gender, family), and nature of record keeping/accounting system is requested.
>
> Section II. Questions asking firms to identify the financial services and products they utilize along with the providers of these services/products. In addition, data was collected concerning the number of firms applying for loans over the past three years along with acceptance and denial rates.
>
> Section III. This portion of the survey seeks the opinions or concerns of firms with respect to a variety of market, regulatory and financing issues. Further, respondent opinions are developed concerning possible "barriers" to obtaining financing in El Paso, as well as possible "strategies" to improve firms' access to capital.

Given the importance of the capital access issue, several stakeholders raised the issue of whether or not every business in El Paso should be able to participate as opposed to doing a sample. Subsequently, it was determined that all firms in the region should be given the opportunity to express their view, requiring that the questionnaire be mailed to each of the 13,600 – plus firms in the El Paso inventory list. In addition, a follow-up or second wave mailing was conducted by sending the instrument to 4,096 randomly selected firms who did not respond to the first wave mail-out. The second wave survey improves the representativeness of the overall response group, but more importantly, provides insight concerning non-response bias inherent in the data gathered from the original mailing. Responses to the survey were coded and checked for accuracy prior to data base entry. After the database was compiled, each file was re-checked for accuracy before any analysis was conducted.

Response Group And Characteristics

The number of usable responses to wave l of the survey totaled 1398; a response rate of 10.3 percent. The follow-up, or second wave, generated an additional 233 responses to the questionnaire for a total of 1631 responding firms, and an overall response rate of 12.1 percent. In our experience, mail surveys of this nature generate a 10 to 20 percent response rate, and, under the right conditions, up to 50 percent (Frey, 50). The actual level achieved is a function of:

-the length and detail of the instrument;
-the perceived importance of the issues being addressed;

-the respondent's belief that their opinion will have an impact; and or,
-the individual's needed to express their concerns.

The questionnaire employed in this study was quite long and detailed leading to a relatively low overall response rate. Thus, beyond the number of respondents, it is also extremely important to consider those who did not respond, or the non-response bias. Non-response bias is addressed in considerable detail in Appendix B and indicates that the sample is representative of the population of businesses in El Paso across almost the entire sample. Detailed characteristics of the response group are presented in Tables 1 and 2. This information supports the proposition that the response group is representative of the business sector in El Paso.

Specifically:

-Table 1 presents a comparison of the geographical distribution of the 13,600-plus business firm inventory versus that of the respondent group. Clearly, a very strong correlation is present, such that there is no statistically significant difference in the distribution at the 99 percent confidence level. Put in lay terms, the respondent sample closely matches the Polk Directory from which the mailing list was generated and no significant statistical differences exist between the two.

-Table 2 details the 12 industry categories employed in the study compared to the Standard Industrial Codes (SIC) two-digit codes and compares the industry distribution of the response group with that of the population developed from the R. L. Polk information. An additional comparison is provided using the Census Bureau's County Business Pattern data; another commonly used source for measuring a business firm population. In both cases, the industry distribution of of the firms sampled shows no statistically significant difference with either population measure.

Additional characteristics of the respondent group are presented in Tables 3 through 6. These findings indicate that the sample is dominated by sole proprietorships, partnerships, and sub-chapter S corporations that are, in general, relatively small firms. Over 25 percent of the responding firms report having revenues below $100 thousand per year, with roughly 60 percent under $500 thousand annually, and 90 percent with less than $5 million in annual sales. The small business character is also demonstrated in the nearly 70 percent of the responding firms having fewer than 10 employees and 94 percent with fewer than 100 employees. Over 98 percent of the businesses have less than 500 employees; the threshold commonly used by the Small Business Administration to define a small business.

The respondent sample has an age distribution for the firm that represents all groupings. Relatively new or "young" firms of less than ten years in age make up approximately one-third, while "middle-aged" enterprises between 10 and 15 years of age account for one-fifth, and the remaining well-

established or "mature" businesses, having been established for more than 15 years, make up about one-half. Added to this, and matching the demographics of the community overall, well over one-half of the sample consists of minority owned firms and two-thirds of the responding businesses are family owned.

In summary, the 2000 UTEP Study generated a representative sample of the El Paso business population by geographical/planning area and by industry category. Furthermore, the characteristics of the respondent group are consistent with current data and perceptions concerning the nature of and structure of the El Paso business community. Finally, the sample is dominated by firms with "perceived" problems and issues with obtaining debt financing in general, and financing from commercial banks in particular.

The statistical validity of this sample is also based, in-part, on non-response bias. While there is no definitive test(s) for assessing a non-response bias hypothesis, we believe the data generated by the survey is representative of the El Paso business population in all probability. As noted previously, the concept of non-response bias is addressed in Appendix B. Our opinion is that if there is a bias, it would be that the experiences/opinions/concerns expressed by the sampled firm somewhat over-state that of the entire population of firms.

The respondents to the earlier study provided a variety of information pertinent to the present project. More specifically:

-Firms were asked to identify the nature of the financial record keeping in place at their business. The first option was "keep expense and revenue receipts/ documents which are compiled at the end of the year for tax purposes." Such an approach is very basic, requires minimal time and expense, and thus, is appealing to many firms. However, this method will not generate financial statements (for example, balance sheet, income statement, sources/uses of funds statement, information with respect to inventory and accounts receivable) on an intra-year or year-end basis. As discussed previously, such information is critical when seeking a loan from a commercial bank and is part of determining effective demand. The remaining three choices in the financial record keeping question involved accounting systems generating periodic statements along with tax return data. The "period" selections ranged from year-end to quarterly to monthly statements. These approaches are more sophisticated and costly. They also provide more detailed information about the firm; data that can be vital to a bank in assessing credit worthiness. As shown in Table 7 almost 25 percent of firms utilize the basic minimal, low cost, year-end compilation for tax purposes approach. Another 11 percent employ a system that generates year-end financials only, and over 60 percent use more sophisticated systems that are the most effective for meeting lender needs for documentation.

-Table 8 reveals the respondent group's overall loan experience with local commercial banks. Over the past three years, 40 percent of firms applied for one or more loans. The overall acceptance rate was 71.4 percent. Similar or higher success rates were reported for line of credit, vehicle, equipment, and business mortgage, and land/building loan applications. Acceptance rates of 45 to 55 percent were the norm for working capital, business start-up, acquisition, and other (for example, multi-purpose and consolidation) loan requests. Traditionally, lending in these areas is

viewed as being higher risk due in large part to lack of data and information among new firms. Of the 29 percent who were denied loans, all report that they explored additional financing options. The 29 percent denial rate also correlates with the 25 to 35 percent portion of firms, who utilize basic, minimal information record keeping systems previously discussed.

-The database allows companies among various subsets of the over-all respondent groups. Table 9 provides information with respect to various groups of firms using a basic, year-end compilation accounting approach. More specifically, small firms utilize such a system more often than older, mature entities although there is no statistically significant difference. Minority owned firms employ the compilation record keeping system more than non-minority owned businesses.

-Table 10 reveals that small, young, and minority owned firms have experienced significantly higher denial rates over the 1997 through 1999 period. Refusal rates for these groups are one-and-a-half to more than two times higher than their counterpart groups.

-The data and analysis presented above show that small, young, and minority owned firms tend to utilize a basic, low-cost accounting system; one which provides only minimal financial information on the firm at year-end. And these groups of firms have experienced high loan denial rates at commercial banks. This is especially the case for minority owned firms. Table 11 offers a comparison between Minority owned and Other owned firms by size, age, and record keeping system. This information provides some insight to the loan denial rates between Minority and Other owned firms showing that firms with less than $100,000 in annual revenues experience a loan denial rate 1.9 times that of larger firms. The proportion of Minority owned, low revenue firms is 1.5 times that of Other owned businesses. Firms with less than 10 employees experienced a loan denial rate of 1.8 times that of larger firms. The Minority owned, small number of workers proportion of firms is 1.2 times that of the Other owned operations. The relevant proportions for age of firms are: 1.5 loan denial rate factor compared to 1.5 factor comparing Minority versus Other owned distributions. Over 40 percent of Minority owned firms utilize the low cost year-end compilation accounting system for tax purposes while less than 30 percent of Other owned firms employ this approach. As discussed previously, this basic and relatively inexpensive record keeping system does not provide much data and information. This can become a problem if the firm seeks debt financing from a commercial bank.

-Table 12 provides information with respect to the relationship between the type of accounting system used by firms and the denial rates experienced. The table presents data for the overall response as well as for Minority owned firms (analysis of Other owned firms was not feasible given the extremely low cell counts of firms in the first two record keeping categories; 5 and 8 firms respectively). As one might hypothesize, the more sophisticated the record keeping system and, therefore, the more information provided, the lower the loan denial rate. This statistically significant relationship is true for all firms and Minority owned firms, yet the denial rates for Minority owned firms remain higher.

Could there be additional factors, which play a role here? Certainly, for example: credit history of the firm and/or individual, past/current relationship with the commercial bank, present and prospective performance of the firm, and the availability of collateral or security. And, if a non-random residual remains, discrimination is a possibility. The scope of the 2000 UTEP could only provide some basic insights to and understanding of the loan denial rate differential. The remainder of the present analysis seeks to provide a more clear, statistically sophisticated view of this issue.

MULTIVARIATE ANALYSIS

As discussed, the principles of economics and finance along with the wide variety of bank regulations suggest a number of factors that would influence the accept/reject commercial lending decision faced by a bank. Of these, a critical factor is that the institution has access to financial information concurring the current and prospective performance of the applicant. The 2000 UTEP Study provides data which can be analyzed to assess the role of financial information availability in the lending decision. In addition, a variety of other variables including the age and size of the firm, the type of business, the legal structure of the firm, geographical location of the business, and the gender/race/ethnicity of the owner can be analyzed. Specifically, the database includes such information on 610 firms who applied for a loan from a local commercial bank during the 1997 through 1999 period. Of this group, 424 firms received a loan and 186 had their loan application denied. Given the 610 observations, one can analyze the predictive power of the following variables with respect to having a loan application approved:

-Type of financial record keeping system: As discussed earlier, firms employing a basic, year-end compilation accounting method for tax purposes only can provide little financial information to a prospective lender. One would anticipate that utilization of this accounting method would have a negative effect upon the probability of gaining loan approval.

-Size of firm: A larger firm, as measured by sales revenues or number of employees may be generating significant cash flows. This fact would enhance the chances of loan approval. On the other hand, the current and prospective performance of a large business is not always bright. Therefore, one cannot hypothesize a direct (that is, positive) or an indirect (that is, negative) impact of this variable on the probability of receiving a loan.

-Age of firm: An older firm, in terms of years since inception or years under current owner, has demonstrated its ability to be successful in its market over time. However, long-term staying power does not automatically insure strong cash flows at present and/or an optimistic future outlook. Thus, the directional effect of this variable upon the loan acceptance probability cannot be assessed a priori.

-Legal form of business: The legal structure of a firm; that is, whether it is a sole proprietorship, partnership, corporation, or sub-chapter S corporation, should have no significant impact, by itself, upon the accept/reject lending decision. To the extent that smaller and/or younger businesses are sole proprietorships or sub-chapter S corporations, the resulting effect could be non-zero. Similarly, if sole proprietorships and sub-chapter S corporations tend to employ a minimal accounting system, the resulting impact could be negative.

These comments introduce a key point: conceptually, multivariate analysis will separate out the effects that each of the variables has upon the probability by loan approval. However, if the " predictor" variables are highly correlated with each other, it becomes difficult (although not necessarily impossible) to disentangle these interrelationships.

-Type of business: The nature of a firm's business, for example retail, manufacturing, or construction could influence the probability of loan approval depending upon the type of loan

requested and present/anticipated economic conditions for the industry in question. The effect could be positive or negative.

-Geographical Location: The physical location of a firm, as a separate factor, should have no impact upon loan approval/denial rates. That is, the census tract or zip code of a firm's operation should not be a predictor of loan approval. Such a practice, termed red-lining, is discriminatory and is in violation of banking regulations.

-Gender of Owner: Whether the majority owner of a firm is male or female should not affect the chances of obtaining debt financing. As above, this would be an act of discrimination.

-Race/Ethnicity of Owner: The race or ethnicity of a business owner, by law, cannot play a role in the lending decision process of a bank.

As a first step towards assessing the predictive powers of the factors listed above, a cross tabulation was generated comparing each of the predictor variables to the dependent variable: whether the loan was approved or denied. Table 13 summarizes the results. As shown, a firm's accounting system, its size and age, as well as the race/ ethnicity of the owner are correlated with the loan approval/denial rates at the 99.9 percent level. The type of business and geographical location of the firm show a correlation at the 94.0 percent level. These results support the findings of the 2000 UTEP Study as well as previous discussion in this paper. All suggest a further study of the potential role of these variables, collectively and individually, in determining the chances or probability of gaining loan approval from a local bank. A statistical analysis technique appropriate for such an investigation is Binary Logistic Regression (BLR).

The BLR method, (see Hasmer, Norusis), allows the researcher to directly estimate the probability of an event occurring; in this case whether a business loan application will be approved or denied. When the variable one seeks to predict or explain is binary in nature; that is yes/no, life/death, approved/denied, or 1/0, traditional regression analysis and its hypotheses testing methods are invalid. The same is true when some or all of the independent or predictor variables are of a binary nature, as in the present case: for example, basic compilation accounting system or sophisticated method, small/large firm, young/old firm, minority owned versus other ownerships of firm. The BLR procedure is designed to deal with such cases.

More specifically, a BLR model estimates the general equation:

$$Z = B_o + B_1 \cdot X_1 + B2 \cdot X\,2 + \text{---} + B_n \cdot X_n$$

where: $Z =$ The predicted value or "score" resulting from the combined effects of the "predictor" variables. The Z – score can be converted into the probability of an event occurring (for example, a loan being approved)

as follows:

$$\text{Probability} = \frac{1}{1 + e^{-z}}$$

The natural number, e, has a value approximately equal to 2.7183. For all practical purposes, the Z score will range from a – 5 to + 5 value. For example:

Z-score	Probability
-5	0.7%
-3	4.7%
-1	26.9%
0	50.0%
1	73.1%
3	95.3%
5	99.3%

X_1 --- X_n = The values of the predictor variables

B_1 … B_n = The coefficients estimated by the BLR technique and attached to our predictor variable values.

B_o = A freestanding constant estimated by the BLR routine. Bo represents the effect of "all other" variable/factors not identified by our X_i predictors which influence the overall Z-score and, therefore, the probability of an event occurring.

For our analysis, the dependent and predictor variables are defined as follows:

Loan Application	1=approved 0=denied
Accounting System	1=sophisticated method 0=basic, year- end compilation approach
Size of Firm by: Revenue	1=large 0=small (that is, less than $100K per yr)
Age of Firm Under: Current Owner	1 = young (that is, less than 10 years) 0=other/old
Legal Form of Business	1= a selected/particular type 0=all others
Type of Business	1=a selected/particular type 0=all others
Geographical Location:	1=a selected area 0=all others
Gender of Owner:	1=female 0=male
Race/Ethnicity of Owner	1=Hispanic/Black 0=all others

The BLR method was employed to estimate 23 equations that provide insight to the role of the variables noted above in determining the probability of loan approval. Table 14 presents the results of our analysis. Specifically:

-The first 22 equations follow a so-called "forward selection" approach. That is, a a potentially key variable is analyzed with respect to its effect on the odds of loan approval/denial. In the present study, the type of financial record keeping method (that is, "accounting system") is hypothesized to be a critical predictor of loan approval. The first equation estimates the role of this variable along with a value of the "constant" term. As noted, this parameter encompasses the effects of all other factors.

Given this, the next step is to include an additional potentially important predictor to the analysis. For example, previous discussion has indicated that the size of firms could have an impact upon the odds of a loan application being accepted. Therefore, the second equation adds this variable to the "constant" and "accounting system" factors. The BLR technique and its diagnostic statistics allow us to assess the relevance or significance of the new predictor in explaining loan approval/denial probabilities.

The key statistics emerging from the BLR method are provided in Table 14. The interpretation of these values is as follows:

- The "B" column provides the estimated values of the coefficients associated with the constant term and the predictor(s).

- The Wald statistic is analogous to the t statistic used in traditional regression analysis. It allows one to judge whether the estimated coefficient reflects the true relationship between the predictor in question and the dependent variable (loan approval). Technically, the Wald statistic tests whether or not the estimated coefficient is significantly different from zero. For example, in equation 2, the estimated value of B for the "accounting system" predictor is 0.437, a non-zero value. The Wald statistic is 4.48 and may be interpreted by viewing the next column, "Significance", showing a .034 value. This implies that there is a 3.4 per cent chance the true value of our coefficient is zero (and therefore, there is no impact upon our dependent variable) while we estimated a non-zero value (and thus, we conclude there **is** an effect; most likely, 0.437). In other words, we can be 96.6 percent (100.0 – 3.4) confident that there is a relationship here. There is only a 3.4 percent chance we are being "fooled". Typically, analysts look for a .05 (5 percent) significance level or less.

- PPC stands for "predicted percentage correct" and is similar to the R^2 value in regression analysis. In equation 1, PPC equals 69.5 revealing that roughly 70 percent of our 610 cases where firms applied for a loan were classified correctly concerning approval or rejection. Thus, the "constant" coefficient and knowledge of the firm's accounting method can predict whether a loan application will be accepted or not in 69.5 percent of the cases.

- The Chi-Square value is analogous to the F-statistic. This value, and its significance level (the last column in Table 14), informs us concerning how confident we can be that there is a relationship between our **collective** predictor

variables (including the constant term) and the dependent variable. In equation 1, the significance level is .001 implying we can be 99.9 percent sure that there is some relationship between our predictor factor(s) and the dependent variable. This statistic and its significance level do **not** reveal which **specific** variable(s) have a relationship with the dependent variable. That requires a return to the Wald statistics and their significance levels.

-As noted, equation 1 estimates the predictive powers of the accounting system employed by the applicant and the "constant" term with respect to the probability of loan approval. Overall, these two factors predict or correctly classify our 610 observations 69.5 percent of the time. And, we can be highly confident concerning the overall equation and its parameter estimates. The significance of the accounting system coefficient (B) is also very strong. This result holds for each of the 23 equations; a result which strongly supports our hypothesis that the type of financial record keeping system utilized by a firm plays a critical role in determining the chances of loan approval.

-Equations 2 through 22 introduce one additional, potential predictor to the original factors (the constant and accounting system) in equation 1 in a systematic fashion. This allows one to assess the incremental impact of each variable on the overall predictive power by the BLR analysis via the PPC figure. Further, the marginal impact of the new factor upon the probability of loan approval can be estimated.

Overall, the results of this process indicate that the predictive power of the simple BLR model in equation 1 cannot be improved. Specifically, the PPC values remain essentially the same over equations 1 through 22. This implies that the addition of incremental predictor to equation 1 is of little value. A review of the marginal effects of these variables, as indicated by the B, Wald, and significance columns, supports this conclusion in general. There are, however,
some exceptions which are discussed below.

-Equation 2 introduces a size of firm predictor to the basic BLR model. As noted earlier, "large" firms are defined as those with over $100,000 in annual gross revenues. This threshold level was selected given the concern over very small firm's access to debt financing in the El Paso region. The addition of this factor adds little to the overall predictive power of the model (PPC) implying there is little value derived from the inclusion of this predictor. On the other hand, the B coefficient estimate is positive and significant. This result suggests that large firms do gain in advantage with respect to the odds of having a loan request approved. Thus, we obtain mixed signals concerning this factor suggesting additional analysis is needed. One final note. Another "size of firm" variable was tested: the number of employers in a firm. The results were virtually the same and are not reported.

-Equation 3 incorporates an "age of firm under current owner" predictor to the original model in equation 1. Overall, the strength of the equation is essentially the same. Concerning the marginal effect, firms under 10 years of age have an advantage in the loan decision process. As before, these conflicting results call for additional analysis. Finally, an "age of firm since inception" was employed with the same results.

-The next four equations (4 to 7) consider the legal form of the business as a possible explanatory factor. None of the four alternative structures improve the overall predictive power of our basic BLR model. The sole proprietorship form of business does show a negative B coefficient and it is statistically significant. This, of course, suggests that these firms are at a disadvantage with respect to gaining loan approval. Again, additional analysis should be conducted.

-Equations 8 through 11 seek to identify relative advantages/disadvantages gained by firms in different lines or industries concerning the probability of obtaining debt financing. Given sample size considerations, our sample of 610 firms was divided into four groups: Agriculture/Wholesale/Other, Service, Manufacturing/Distribution, and Retail. None of the

four predictors improve upon the original, simple model in equation 1. The incremental coefficient estimate for Retail firms is negative and significant; another result in conflict with the PPC and its significant outcome. Additional analysis is called for and is discussed later in this report.

-Equations 12 through 20 provide a test concerning geographical location discrimination or redlining by local banks. The six regions of El Paso utilized in the 2000 UTEP study are sequentially integrated into the original model. In addition, combinations of these regions, for example the South Central and Lower Valley areas of El Paso, are also analyzed. The combinations reviewed generally have relatively poor records with respect to income and growth. As before, the particular geographical region is added to the basic model. In all nine equations, the location predictor adds no explanatory power to forecasting loan approval odds. Further, there are no statistically significant negative B coefficient estimates. Therefore, there is no evidence to support the hypothesis of geographical location discrimination or red lining in El Paso.

-Equation 21 examines the influence of gender on loan approval/denial probabilities. By law, the gender of a firm's owner should have no impact upon the loan acceptance/rejection decision-making process. The results in the equation provide mixed evidence concerning this question. The gender predictor adds no explanatory power to our basic, equation 1 model. In fact, the PPC actually declines. On the other hand, the individual B parameter estimate is negative, implying that female-owned firms are at a disadvantage, and is statistically significant. Such conflicting evidence calls for additional analysis.

-The last equation employing the forward selection approach, equation 22, analyses the impact of owners' race/ethnicity upon loan approval probability. If the addition of this predictor significantly improves the overall PPC value/or a statistically significant negative B coefficient is found, one would argue that race/ethnicity discrimination is present. Such is not the case given the results of equation 22. The overall PPC value falls dramatically and a positive, although insignificant B coefficient emerges. There is no evidence to support the hypothesis of race/ethnicity discrimination by local banks in the business lending process.

To summarize:

-BLR analysis utilizing a forward selection process confirms the importance of a firm's financial record keeping system with respect to improving the probability of having its loan application approved.

-There is no evidence to support the hypotheses of geographical location and race/ethnicity discrimination by local banks.

-The role played by a firm's size, age, legal form of business, gender of its owner, and the fact that it is in the retail sector require additional analysis.

The BLR technique can employ a "backward elimination" approach to conduct the above mentioned additional analysis and will derive the best overall model/equation with respect to predicting loan approval or rejection (Norusis). This version of BLR proceeds as follows:

-**All** hypothesized relevant predictors are included in the BLR model. The backward elimination algorithm estimates this equation with coefficient estimates and their significance levels as well as overall measures; that is the PPC, Chi-Square, and Significance values.

-Given the above, the routine eliminates the least significant variable from the estimated equation. Then, the Z equation is re-estimated. As before, the least significant predictor is eliminated, the Z equation is re-estimated, and so on.

-This iterative process is followed until the best collection of predictor variables is obtained. Throughout these steps, the researcher has no control; that is he/she cannot "force" the results.

Equation 23 in Table 14 presents the results of this analysis. Specifically:

-Ultimately there are four predictors that, as a group, provide the best general model/equation for calculating the probability of loan approval. The factors are: a firm's accounting system, the firm's age under its current owner, the fact that the business is a sole proprietorship, and the "constant" which encompasses all other relevant factors not considered explicitly in the equation.

-The backward elimination approach deletes the "size of firm," "retail firm," and "gender" predictors. That is, these factors are not deemed to be significant contributors to the determination of the loan approval probability. As a result, the gender discrimination hypothesis is not supported.

-The PPC statistic for this overall model is essentially the same as the basic model containing only two predictors: the firm's record keeping system plus the "constant" term.

-As with the first 22 equations, the fact that a firm has an accounting system capable of providing a prospective lender with basic financial information plays a significant role in determining the probability of acceptance. In fact, by incorporating the "sophisticated" accounting system assumption into equation 23 versus a "basic" system value (that is, a "1" versus a "0"), loan approval probabilities improve 40 to over 50 percent (depending upon the assumptions concerning the remaining predictors).

-Relatively young firms, those with the current owner in place for 10 years, in fact have a greater probability of gaining loan approval. Thus, when other predictors are in place, the "age of firm" factor plays a somewhat different role than that suggested in the 2000 UTEP study.

-The "sole proprietorship" predictor has a negative impact upon the probability of a loan application being accepted. We believe that this result is, in fact, the combined effect of low revenue (less than $100 thousand per year) and individually owned firms. Recall that both "firm size" and "sole proprietor" predictors were entered into the first iteration of the backward elimination BLR process. Given the strong correlation between these two variables, only one will survive the elimination procedure. Given the sole proprietorships outnumbered "small revenue firms by a 2.5 to 1 ratio in our sample, the former predictor survived the elimination procedure. Alternatively stated, we believe the BLR routine could not separate the two factors and their individual effects. As revealed in the 2000 UTEP study, small and individually owned/operated firms face a lower probability of loan approval. At the same time, one must remember that the addition of this predictor, or any other, adds little if any forecasting value over the simple BLR equation 1.

-The "constant" coefficient plays a significant role in determining the loan approval/denial odds. The reader must appreciate that while the BLR analysis conducted in this study evaluated a considerable number of potentially important predictors and related issues, the 2000 UTEP study did not generate sufficient data to develop a comprehensive credit scoring model or equation (nor was the study designed with this purpose). Therefore, the "constant" coefficient incorporates a wide variety of factors important in making the final lending decision. For example (and recall the C's of credit discussed earlier):

- A firm could have a sound financial record keeping system but if the owners are not willing to share this information with a prospective lender...
- The firm's records may indicate financial difficulties currently or prospectively.
- The firm (and its owners) may not have sufficient collateral to act as security on a loan; or, they may not be willing to offer certain assets as collateral.
- The firm's (and its owner's) credit history may reveal problems.
- The firm's (and its owners) may not have any significant past or present relationship with the lending institution.
- The owners of the firm may have inadequate equity capital invested in their business; that is, the firm may have excessive financial leverage from the lender's point of view.
- The prospective lender's condition or situation can impact incremental lending decisions. Relatedly, the bank's policies with respect to various types of commercial lending, can influence loan approval probabilities. Such policies may not be received favorably by all segments of the business sector or general public. Nevertheless, such decisions are those of the institution's owners/ managers. As the 2000 UTEP study suggests, we can "vote with our feet."

SUMMARY

Commercial banks have traditionally played a significant role in providing debt financing to business firms which in turn, fosters the growth and development of an economic region. The continuing wave of bank mergers and acquisitions, however, has raised concern about the availability of debt capital, especially to small business firms. In particular, this issue has been hotly debated in the Texas-Mexico border region where small firms dominate the business sector. Further, a significant portion of these entities are minority owned.

During the spring of 2000, The University of Texas was commissioned by the El Paso Leadership and Research Council to explore a broad set of issues surrounding supply and demand factors with respect to commercial banks, small business firms and debt financing. The study revealed among other things that small, relatively young and minority owned firms experienced higher loan denial rates compared to their counterparts. The present study has the purpose of providing a more comprehensive statistical analysis concerning the factors which influence or predict loan approval odds.

After a review of a bank's lending decision process and the nature of the 2000 UTEP database, this study employed the multivariate statistical analysis technique, binary logistic regression (BLR), to identify the individual and collective roles of the following variables concerning their influence on loan approval/denial rates:

-Nature of financial record keeping system.
-Size of firm.
-Age of firm.
-Type of business.
-Legal structure of firm.
-Geographical location of firm.
-Gender of majority owner.
-Race/Ethnicity of majority owner.

The BLR technique was implemented in a "forward selection" as well as a "backward elimination" fashion to estimate a total of 23 equations evaluating the predictors noted above. Key findings were as follows:

-A firm utilizing an accounting system capable of providing key information to a prospective lender plays a significant role in determining the probability of loan approval.

-No evidence was uncovered to support a hypothesis of geographical location discrimination or redlining.

-The gender of a firm's majority owner has no statistically significant impact upon loan acceptance/denial rates.

-The race/ethnicity of a firm's majority owner does not impact the probability of loan approval.

-The nature of a firm's business (for example, retail or manufacturing) has no significant effect upon accept/reject odds.

-When other "predictor" factors are allowed for, relatively young firms; that is, those in operation for less than 10 years under the current owner, reveal a tendency towards higher loan approval probabilities.

-Interpreting the results of BLR analysis implied that two highly correlated predictors, "size of firm" and "legal structure of firm" impact the chances of loan approval. Specifically, firms with annual revenues below $100 thousand and sole proprietorship face lower loan approval probabilities. At the same time, the inclusion of this factor, or any other, added little if any predictive power over-and-above the simple model with a firm's accounting system and a "constant" as predictors of loan acceptance.

-The "constant" coefficient in the BLR equations has a significant impact upon the lending decision and the associated probabilities. This factor represents a composite of all other considerations relevant to the loan approval/denial process; those which were not analyzed explicitly in the BLR analysis.

-The BLR analysis presented in this report assesses the impact, individually and collectively, of a considerable number of factors which are potentially important in determining success in obtaining debt

financing. The estimated equations, however, are not intended to be interpreted as credit scoring decision models.

TABLE 1
RESPONSE GROUP: GEOGRAPHICAL DISTRIBUTION RELATIVE TO BUSINESS FIRM POPULATION[1]

AREA[2]	POPULATION (%)	RESPONSE GROUP (%)
North East	9.3	7.8
North Central	16.1	19.6
West	16.0	17.4
South Central	13.1	13.8
Riverside	16.3	14.5
East	29.1	26.9

[1] Wilcoxon Matched Pair Signed Rank Test of Differences - no significant difference in distributions at the 99 percent confidence level.

2 **Area Definitions**

North East	(ZIP codes 04, 24 and 34)
Boundaries	
West:	Mt. Franklin Ridgeline
North:	City Limits
East:	Ft. Bliss Boundary
South:	Fred Wilson and McKelligon Canyon Roads
North Central	(ZIP codes 02, 03 and 30)
Boundaries	
West:	Rio Grande River
North:	Executive Center, McKelligon Canyon and Fred Wilson Roads and East-West Runway at the Airport
East:	Airport Road, Ft. Bliss Boundary, Magruder Street and Paisano Avenue
South:	I-10
West	(ZIP codes 12, 22 and 32)
Boundaries	
West:	Stateline
North:	Stateline
East:	Mt. Franklin Ridgeline
South:	Executive Center
South Central	(ZIP codes 01 and 05)
Boundaries	
West:	Rio Grande River
North:	I-10
East:	Marlow Street and Ascarate Park East Boundary
South:	Rio Grande River
Riverside	(ZIP codes 07, 15 and 27)
Boundaries	
West:	Marlow Street and Ascarate Park East Boundary
North:	I-10
East:	City Limits
South:	Rio Grande River
East	(ZIP codes 25, 35 and 36)
Boundaries	
West:	Airport Road, Ft. Bliss Boundary, Magruder Street and Paisano Avenue
North:	East-West Runway at Airport and Ft. Bliss Boundary
East:	City Limits
South:	I-10

Source: Demographic Package, City of El Paso, December 1999.
Note: The Lower Valley planning area was delimited to the area within the city limits and renamed Riverside.

TABLE 2
INDUSTRIAL CATEGORIES FOR RESPONDENTS BASED ON TWO-DIGIT STANDARD INDUSTRIAL CLASSIFICATIONS (SIC)

PERCENTAGE

Industrial Category SIC Code	**Population**	**County Business Patterns**	**Respondents**
1.Agriculture	1.4	1.0	3.4
2. Business Services	9.6	8.4	5.2
3. Distribution/Transportation	6.6	9.3	8.2
4. Construction	8.5	7.5	9.6
5. Finance, Insurance, Real Estate	6.4	9.1	10.7
6. Health	5.8	7.4	6.9
7. Other Services	10.7	8.2	4.8
8. Manufacturing	10.0	4.6	18.6
9. Retail-Other	19.5	14.2	11.5
10. Retail-Food	7.3	10.7	5.3
11. Wholesale Trade	6.5	9.1	2.8
12. All Other	7.7	10.6	12.9

No significant difference in distribution at the 99 percent level.

*Source County Business Patterns are based on data from: County Business Patterns Economic Profile, Washington, D.C.: U.S. Bureau of the Census, 1997, and U.S.A. Counties General Profile, Washington, D.C., U.S. Bureau of the Census, 1996.

TABLE 3
RESPONSE GROUP CHARACTERISTICS: LEGAL FORM OF BUSINESS

LEGAL FORM	RESPONSE GROUP (%)
Sole Proprietorship	44.0
Sub-Chapter S Corporation	20.0
Partnership	7.7
Other Corporation	28.3

TABLE 4
RESPONSE GROUP CHARACTERISTICS: SIZE OF FIRM

1999 GROSS REVENUES	RESPONSE GROUP (%)
Less than $100 k	26.6
$100 k - $499 k	32.0
$500 k - $2,499 k	25.3
$2,500 k - $4,999 k	6.0
$5,000 k or More	10.1
PAID EMPLOYEES (20^{+} HOURS PER WEEK)	
Less than 10	69.6
10-99	24.7
100-499	4.4
500 or More	1.4

TABLE 5
RESPONSE GROUP CHARACTERISTICS: AGE OF FIRM

AGE SINCE INCEPTION	RESPONSE GROUP (%)
3 Years or Less	12.1
4 - 9 Years	20.8
10-15 Years	18.4
More Than 15 Years	48.7
AGE UNDER PRESENT OWNER(S)	
3 Years or Less	17.3
4-9 Years	24.1
10-15 Years	19.2
More Than 15 Years	39.4

TABLE 6
RESPONSE GROUP CHARACTERISTICS: OWNERSHIP

OWNERSHIP CATEGORY	RESPONSE GROUP (%)
50 Percent or More of Firm Minority Owned	55.8
Gender of Individual Owning 50 Percent or More of Firm	
Male	74.8
Female	25.2
50 Percent or More of Firm Owned by Single Family	67.4

TABLE 7
RESPONSE GROUP CHARACTERISTICS: RECORD KEEPING SYSTEM

LEVEL OF RECORD KEEPING	RESPONSE GROUP (%)
Keep Expense and Revenue Receipts Compiled at Year-End	24.9
Accounting System Providing Year-End Financial Statements and Tax Information	10.9
Accounting System Providing Monthly/Quarterly and Year-End Financial Statements and Tax Information	64.2

TABLE 8
RESPONDENT GROUP LOAN EXPERIENCE WITH COMMERCIAL BANKS IN EL PASO REGION

% Acceptance Rate of Loan Applications: Overall	71.4
% Acceptance Rate of Loan Applications: Category/Type	
Line of Credit	71.4
Working Capital	45.7
Vehicle	87.7
Equipment	72.5
Business Mortgage	71.0
Land and Building	70.6
Loan to Start-Up Business	56.9
Loan to Acquire Business	48.8
Other Loan	46.0
Action if Loan Application Denied (%)	
Applied at Second Bank	34.1
Applied at Second and Third Banks	7.6
Applied at Second/Third Bank and Other Institutions	41.2
Explored all Options	12.0
Reason for no Loan Application at Local Commercial Banks	
Over 1997-Present (%)	
- Did not Require Financing	68.4
- Obtained Financing from other Institution other than Local Bank	17.3
- Other	14.3

TABLE 9
RECORD KEEPING SYSTEM OF FIRMS BY SIZE, AGE AND OWNERSHIP

RECEIPTS FIRM CATEGORY		**EXPENSE AND REVENUE COMPILED AT YEAR-END (%)**
Annual Revenues		
Less Than $100,000		64.8
Over $100,000		25.7
N = 1543	$X^2 = 198.55$	Significant at .01
Number of Employees		
9 or Less		45.4
10 or More		12.3
N = 1556	$X^2 = 157.63$	Significant at .01
Years in Business Under Current Owner		
3 Years or Less		41.8
Over 3 Years		34.7
N = 1575	$X^2 = .006$	Not Significant
Minority Owned Business		
Yes		40.4
No		29.8
N = 1528	$X^2 = 18.37$	Significant at .01

TABLE 10
LOAN DENIAL RATE OF FIRMS BY SIZE, AGE AND OWNERSHIP

FIRM CATEGORY			LOAN APPLICATION Denied(%)
Annual Revenues			
Less Than $100,000			51.8
Over $100,000			27.5
N = 607	$X^2 = 19.89$	Significant at .01	
Number of Employees			
9 or Less			36.6
10 or More			20.4
N = 619	$X^2 = 18.47$	Significant at .01	
Years in Business Under Current Owner			
3 Years or Less			43.5
Over 3 Years			28.1
N = 622	$X^2 = 17.39$	Significant at .01	
Minority Owned Business			
Yes			39.2
No			17.9
N = 607	$X^2 = 32.43$	Significant at .01	

TABLE 11
CHARACTERISTICS OF MINORITY-OWNED AND "OTHER" FIRMS

CHARACTERISTIC			MINORITY-OWNED (%)	OTHER (%)
Annual Revenues Less Than $100 k			31.0	20.2
N = 1533	$X^2 = 23.03$	Significant at .01		
9 or Less Employees			74.3	63.3
N = 1545	$X^2 = 21.82$	Significant at .01		
Age Under Present Owner(s): 3 Years or Less			20.5	13.6
N = 1562	$X^2 = 31.16$	Significant at .01		
Level of Record Keeping: Expense and Revenue Receipts Compiled at Year-End			40.4	29.8
N = 1528	$X^2 = 18.37$	Significant at .01		

TABLE 12
ACCOUNTING SYSTEM AND LOAN DENIAL RATES:
ALL FIRMS AND MINORITY-OWNED FIRMS

LEVEL OF RECORD KEEPING	LOAN DENIAL RATE (%) ALL FIRMS	MINORITY-OWNED FIRMS
Keep Expense and Revenue Receipts Compiled at Year-End	47.7	61.4
Generate Income Statement, Balance Sheet and Tax Return at Year-End	41.3	45.7
System Generating Quarterly/Monthly and Financials at Year-End	30.1	38.1
	N = 618 X^2 = 13.761 Significant at .01	N= 341 X^2 = 11.987 Significant at .01

TABLE 13
CROSS TABULATION BETWEEN LOAN APPROVAL/DENIAL
WITH POTENTIAL PREDICTOR FACTORS

Potential Predictor	Chi-Square	df	Significance Level
Accounting System	12.228	1	.000
Size of Firm: Revenues	19.891	1	.000
Size of Firm: Employees	18.478	1	.000
Age of Firm: Since Inception	17.045	3	.001
Age of Firm: Current Owner	17.393	3	.001
Legal Form of Business	21.689	3	.000
Type of Business/Industry	18.813	11	.065
Geographical Location	10.554	5	.061
Gener of Owner	4.535	1	.033
Race/Ethnicity of Owner	32.433	1	.000

TABLE 14
RESULTS OF BINARY LINEAR REGRESSION WITH ALTERNATIVE PREDICTOR VARIABLE COMBINATIONS

Equation	Predictor Variables	B	Wald	Significance	PPC	Chi-Square	Significance
1	Constant	-0.291	0.78	.377	69.5	11.87	.001
	Acct. System	0.657	12.04	.001			
2	Constant	-1.450	8.47	.002	70.2	21.01	.000
	Acct. System	0.437	4.48	.034			
	Size: Revenues	0.815	9.81	.002			
3	Constant	-1.444	11.23	.001	69.2	31.30	.000
	Acct. System	0.732	14.07	.000			
	Age: Current Owner	0.366	19.32	.000			
4	Constant	0.031	0.64	.426	69.1	26.95	.000
	Acct. System	0.456	4.95	.026			
	Sole Proprietor	-0.730	14.09	.000			
5	Constant	-0.379	1.28	.258	69.1	17.29	.000
	Acct. System	0.639	10.58	.001			
	Sub-Chapter S	0.447	4.18	.041			
6	Constant	-0.406	1.45	.229	69.1	13.50	.001
	Acct. System	0.703	13.33	.000			
	Partnership	0.268	0.53	.468			
7	Constant	-0.368	1.21	.272	69.1	14.96	.001
	Acct. System	0.640	10.66	.001			
	Corporation	0.285	1.98	.160			

TABLE 14 - CONTINUED
RESULTS OF BINARY LINEAR REGRESSION WITH ALTERNATIVE PREDICTOR VARIABLE COMBINATIONS

Equation	Predictor Variables	B	Wald	Significance	PPC	Chi-Square	Significance
8	Constant	-0.305	0.83	.363	69.5	11.92	.003
	Acct. System	0.660	12.08	.001			
	Agric./Whols/Other	0.050	0.040	.825			
9	Constant	-0.311	0.87	.352	69.5	12.00	.003
	Acct. System	0.658	12.07	.001			
	Service	0.073	0.13	.722			
10	Constant	-0.404	1.42	.234	69.5	13.95	.001
	Acct. System	0.635	11.12	.001			
	Manuf. & Dist.	0.261	2.09	.148			
11	Constant	-0.193	0.33	.564	69.3	16.03	.000
	Acct. System	0.648	11.61	.001			
	Retail	-0.447	4.27	.039			

TABLE 14 - CONTINUED
RESULTS OF BINARY LINEAR REGRESSION WITH ALTERNATIVE PREDICTOR VARIABLE COMBINATIONS

Equation	Predictor Variables	B	Wald	Significance	PPC	Chi-Square	Significance
12	Constant	-0.258	0.61	.436	69.5	12.84	.002
	Acct. System	0.652	11.82	.001			
	Northeast	-0.334	1.00	.318			
13	Constant	-0.352	1.12	.291	69.5	13.57	.001
	Acct. System	0.660	12.09	.001			
	North Central	0.295	1.66	.198			
14	Constant	-0.290	0.77	.379	69.5	11.87	.003
	Acct. System	0.658	12.00	.001			
	West	-0.005	0.00	.980			
15	Constant	-0.388	1.35	.246	69.5	15.86	.000
	Acct. System	0.674	12.51	.000			
	South Central	0.539	3.72	.054			
16	Constant	-0.225	0.46	.498	70.2	17.68	.000
	Acct. System	0.674	12.51	.000			
	Lower Valley	0.574	5.97	.015			
17	Constant	-0.284	0.72	.397	69.5	11.88	0.003
	Acct. System	0.657	12.00	.001			
	East	-0.025	0.01	.906			
18	Constant	-0.264	0.62	.429	69.5	12.07	.002
	Acct. System	0.657	12.02	.001			
	Lower Valley/ South Central	-0.087	0.20	.654			
19	Constant	-0.348	1.04	.308	69.5	12.23	.002
	Acct. System	0.659	12.08	.001			
	Lower Valley/ South Central/ North Central	0.112	0.40	.529			
20	Constant	-0.387	1.11	.291	69.5	12.23	.002
	Acct. System	0.662	12.19	.000			
	Lower Valley/ South Central/ North Central Northeast	0.120	0.36	.549			

TABLE 14 - CONTINUED
RESULTS OF BINARY LINEAR REGRESSION WITH ALTERNATIVE PREDICTOR VARIABLE COMBINATIONS

Equation	Variables	B	Wald	Significance	PPC	Chi-Square	Significance
21	Constant	0.246	0.28	.596	68.2	13.66	.001
	Acct. System	0.648	9.55	.002			
	Gender of Owner	-0.455	3.93	.047			
22	Constant	-0.864	2.65	.103	61.1	7.36	.025
	Acct. System	0.591	6.09	.014			
	Race/Ethnicity	0.282	0.77	.380			
23	Constant	-1.020	3.45	.063	68.4	35.78	.000
	Acct. System	0.556	5.65	.017			
	Age: current owner	0.386	15.80	.000			
	Sole propr.	-0.616	7.91	.005			

APPENDIX A

Public Policy Research Center
Benedict Hall, 103
El Paso, Texas 79968-0703

March 3, 2000

Dear Sir or Madam,

The Public Policy Research Center at UTEP, on behalf of the El Paso Leadership and Research Council, is conducting a large-scale survey of El Paso businesses. The name, address, and industrial classification of your firm were acquired from the R.L. Polk Company. Your company was selected at random from a list provided by R.L. Polk.

The purpose of this survey is to profile the El Paso business sector with respect to the financial services they utilize along with the sources of these services. In addition, we seek your opinions concerning a variety of capital access and other issues faced by business in the region. UTEP was selected to conduct this study to maintain the ***confidentiality*** of all individual firm data and to ensure a quality survey method. Participation by all firms is necessary for an accurate community profile. This is your opportunity to be heard on these important subjects.

Would you, or the appropriate officer in your company, please take the time to answer the attached questions? The questionnaire is simple to complete. There are no "good" or "bad", no "right" or "wrong" answers. English and Spanish language versions of the questionnaire are provided. Use either to record your responses, the questions are identical. **Survey completion will take 15-20 minutes**.

So that your responses may be included in the community profile, **please return the completed questionnaire in the postage paid envelope in the next 10 days**. You may notice a code number printed on the attached forms. Please do not remove this number, it will categorize your firm for data analysis purposes. Remember, **all individual firm responses will be kept in strict confidence**. Overall results of the survey will be made available to the public in May 2000. If you have questions concerning this survey contact David A. Schauer at 915-747-7790.

Sincerely,

Dennis L. Soden, Ph.D
Director
Public Policy Research Center

David A. Schauer, Ph.D.
Associate Professor
Department of Economics and Finance

Enclosures: Questionnaire

CODE NO. _____
(Please do not destroy)

FINANCIAL SERVICES SURVEY

Section I

This section seeks basic information about your business. Please answer each question as accurately as possible. If you do not know the answer please leave the question blank.

1. What is the **legal form** or **structure** of your firm? (Please check one).

____	Sole Proprietorship	____	Partnership
____	Subchapter S Corporation	____	Other Corporation

2. Estimate your firm's **Gross Sales Receipts** (**Revenues**) for 1999 or the most recent fiscal year. (Please check one).

____ $24,999 or less	____ $250,000 to $499,999	____ $2,500,000 to $3,499,999
____ $25,000 to $49,999	____ $500,000 to $749,999	____ $3,500,000 to $4,999,999
____ $50,000 to $99,999	____ $750,000 to $999,999	____ $5,000,000 or more
____ $100,000 to $249,999	____ $1,000,000 to $2,499,999	

3. Approximately how many **paid employees** (working twenty or more hours per week) does your firm currently have? (Please check one).

____ 9 or less	____ 30 to 49	____ 100 to 149	____ 250 to 349
____ 10 to 19	____ 50 to 69	____ 150 to 199	____ 350 to 499
____ 20 to 29	____ 70 to 99	____ 200 to 249	____ 500 or more

4. (A) **How long** has this business served the El Paso region **under previous as well as current owners**. (Please check one).

____ less than one year	____ 1 to 3 years	____ 4 to 6 years
____ 7 to 9 years	____ 10 to15 years	____ more than 15 years

(B) **How long** has this business served the El Paso region **under the present owners?** (Please check one).

____ less than one year	____ 1 to 3 years	____ 4 to 6 years
____ 7 to 9 years	____ 10 to15 years	____ more than 15 years

5. (A) Considering the ownership of this firm, would it be classified as a **minority business** (that is, fifty percent or more minority owned)? (Please check one)

____ Yes	____ No	____ Don't Know

(B) **If you answered "Yes" above, what is the key minority ownership category**? (Please check one).

____ Hispanic Ownership	____ African American Ownership
____ Native American Ownership	____ Asian/Pacific Islander Ownership
____ Other	

6. (A) **Is there one individual owning fifty percent or more of this firm?** (Please check one).

____ Yes	____ No	____ Don't Know

(B) **If you answered "Yes" above, is the majority owner of the firm:**

____ Male	____ Female

7. Is fifty percent or more **owned by a single family** (includes brothers, sisters, parents, aunts, uncles, cousins and relatives through marriage). (Please check one).

_____ Yes _____ No _____ Don't Know

8. (A) Does the **firm export any products** to countries outside of the United States? (Please check one).

_____ Yes _____ No _____ Don't Know

(B) **If you answered "Yes", what percentage** of the firm's sales revenues came from outside the United States? (Please check one).

_____ Less than 10% _____ 25-49%
_____ 10-24% _____ 50% or more

9. Business firms generally maintain **financial records** concerning the performance of their business during the year. However, the time, effort, and resources allocated to record keeping varies significantly from one firm to another. Please check the **financial/accounting system which is the most accurate reflection of your firm's approach.** (Please check one).

_____ Keep expense and revenue receipts/documents which are compiled at the end of the year for tax purposes.
_____ Maintain records which can provide information to generate an income statement and balance sheet along with tax information at the end of the year.
_____ Have a system which generates quarterly along with year-end financial statements and tax information.
_____ Utilize a system which provides monthly, quarterly and year-end financial statements and tax information for the year.

Please answer the next question **if this firm was acquired or "started" by the current owner(s) in the period 1997 to the present**. If this is not the case, please go to section II.

10. **How were the acquisition or start-up costs financed**? Please estimate the percent of total financing coming from each category. (Insert a number from 0 percent to 100 percent on each of the lines below).

_____ owner(s) own funds
_____ loan from family/relatives/friends
_____ loan from commercial bank
_____ loan from other lending institution

Total of the above four entries should equal 100 percent.

Section II

This section of the questionnaire identifies the financial services and products utilized by your firm along with the sources of these financial services/products. **Circle "Y=Yes" for services your firm has used during the 1997 to present period, "N=No" for services your firm has not used, or "DK=Don't Know" if you are unsure**. Note: many firms use personal checking accounts, personal credit cards, personal loans, home equity loans, etc. **for personal as well as business purposes**. **If this is true in your case, circle "Y=Yes"** for the appropriate products and services. **Then, identify by letter the source** of the **product** or **service utilized** by **your firm from the following list**. For example, if your firm has a "Business Checking Account" at a "Commercial Bank in El Paso County", you would circle "Y" in the Used Service? column and enter "a" in the Provider column.

(a) Commercial Bank in El Paso County
(b) Other Commercial Bank (without El Paso offices)
(c) Savings and Loan
(d) Credit Union
(e) Finance Company
(f) Brokerage Company
(g) Leasing Company
(h) Mortgage Bank
(i) Factoring Company
(j) Credit Card Company
(k) Venture Capital Firm
(l) Small Business Administration (SBA)
(m) Other Government Agency (Non-SBA)
(n) Family/Relatives/Friends
(o) Other Institution

Used Service?				**If "Yes" Indicate the Provider**
1. **Product/Service**	**Yes**	**No**	**Don't Know**	**of the Service/Product**

Personal Checking Account	Y	N	DK	_____
Business Checking Account	Y	N	DK	_____
Certificates of Deposit	Y	N	DK	_____
- *continued on next page* –				
Personal Credit Card	Y	N	DK	_____
Business Credit Card	Y	N	DK	_____
Short-Term (less than one year)				
Business Loan/Line of Credit	Y	N	DK	_____
Personal Loan	Y	N	DK	_____
Commercial Real Estate Loan	Y	N	DK	_____

Product/Service	**Yes**	**No**	**Don't Know**	**If "Yes" Indicate the Provider of the Service/Product**
Home Equity Loan	Y	N	DK	_____
Equipment Loan	Y	N	DK	_____
Vehicle Loan	Y	N	DK	_____
Equipment/Vehicle Leasing	Y	N	DK	_____
Trade Credit (purchase of materials on credit from suppliers/vendors)	Y	N	DK	_____
Factoring of Accounts Receivable	Y	N	DK	_____

2. **A list of El Paso financial institutions is shown below.** This question has two parts. First, if you had a business account/loan (or a personal account/loan used to some extent for business purposes) during the 1997 to present period at any of these institutions, please check all that apply. **Second, circle the name of your current, principal financial institution.**

_____ Bank of America (formerly Nations Bank/Sunwest)
_____ Bank of the West
_____ Chase Bank of Texas (formerly Texas Commerce Bank)
_____ First National Bank of Fabens (includes former Bank of Ysleta and Bank of El Paso)
_____ Norwest Bank/Wells Fargo
_____ State National Bank (formerly Montwood National Bank, Bank CNB/Continental National Bank and Valley Bank)
_____ Credit Union
_____ Brokerage Firm
_____ Finance Company
_____ Leasing Company
_____ Other Commercial Bank
_____ Other Financial Institution
_____ None

3. (A) Has your firm **applied for a loan from a commercial bank in the El Paso region** over the 1997 to present period?

_____ Yes _____ No _____ Don't Know

If you answered "No", please skip the next question and go to item C.

(B) **If you answered "Yes"**, please check the type(s) of loans applied for and circle either "A" or "D" to indicate whether the loan requests were Approved or Denied. **If you answered "No"**, please go to item C. Note: If you applied for a loan(s) at more than one institution and, ultimately, **did receive** the loan, you should circle "A" for the appropriate loan(s).

Type of Loan Requested	**Approved\Denied**	
_____ Line of Credit	A	D
_____ Working Capital	A	D

Type of Loan Requested	**Approved\Denied**	
_____ Vehicle Loan for Business Purposes (at least in part)	A	D
_____ Equipment Loan	A	D
_____ Mortgage for Business Purposes	A	D
_____ Land and Building	A	D
_____ Loan to Start-Up Business	A	D
_____ Loan to Acquire Business	A	D
_____ Other (please specify)_____	A	D

- continued next page -

(C) **If you applied for a loan from a local commercial bank and were denied**, did you (please check **all** that apply)

_____ go to a second commercial bank in the region for financing
_____ go to a third commercial bank in the region for financing
_____ go to other financial institutions for required funds.

(D) **If you answered "No" to item 3(A),** please provide the reason why. (Please check only one).

_____ Did not require any financing
_____ Obtained required financing from financial institutions other than local commercial banks
_____ Other (please specify)

4. Concerning the following **business support resources**, indicate those your firm has used over the 1997 to present period (Please check **all** that apply).

_____ El Paso Black Chamber of Commerce
_____ El Paso Hispanic Chamber of Commerce
_____ Greater El Paso Chamber of Commerce
_____ Service Corps of Retired Executives (SCORE)
_____ Small Business Administration (SBA)
_____ Small Business Development Center (SBDC) at El Paso Community College
_____ UTEP's Family Business Forum
_____ UTEP's Franchise Center
_____ UTEP's Texas Centers for Border Economic Development
_____ Other UTEP resources
_____ Accounting firm
_____ Law firm

Section III

This section of the survey seeks your opinions or concerns with respect to a variety of general and specific issues/circumstances presently facing businesses.

1. Using a five point scale ranging from **1 = "not important at all" to 5 = "extremely important"** rate the importance of each of **the following issues** to your firm as you start the year 2000. **Please review the entire list before assigning your ratings**. (Please circle your ratings).

	Rating Scale					
	Not Important ----------					Extremely Important
Taxes	1	2	3	4	5	
Poor Sales	1	2	3	4	5	
Financing and Interest Rates	1	2	3	4	5	
Operating and Production Costs		1	2	3	4	5
Government Regulations and Red Tape	1	2	3	4	5	
Availability and Quality of Labor		1	2	3	4	5
Cost of Insurance	1	2	3	4	5	
Other (please specify)		1	2	3	4	5

2. Using a five point scale ranging from **1 = "not important at all**" **to 5 = "extremely important"**, rate the importance or seriousness of each of these **issues** to your firm as you start the year 2000. **Please review the entire list of issues before assigning your ratings.** (Please circle your ratings).

	Rating Scale				
	Not Important ----------				Extremely Important
Competing effectively with larger firms	1	2	3	4	5
Environmental regulations	1	2	3	4	5
Obtaining funds to acquire a business	1	2	3	4	5

Costs of labor and materials	1	2	3	4	5	
Occupational Safety and Health Act (OSHA) regulations	1	2	3	4	5	
Obtaining financing for land and buildings	1	2	3	4	5	
Developing and maintaining a quality labor force	1	2	3	4	5	

- *continued on next page* –

Process for acquiring licenses/permits	1	2	3	4	5	
Obtaining financing for machinery, equipment or vehicles	1	2	3	4	5	
Acquiring key technology and equipment	1	2	3	4	5	
State and local taxes	1	2	3	4	5	
Obtaining short-term/working capital financing	1	2	3	4	5	
Outlook for demand (sales) of my product or service	1	2	3	4	5	
Workers' compensation costs	1	2	3	4	5	
Obtaining funds to start-up a business	1	2	3	4	5	
Other (please specify) _____	1	2	3	4	5	

3.**The factors listed below are possible "barriers" to obtaining financing in El Paso. Given your experience**, use the five point scale ranging from **1 = "not a problem at all" to 5 = "a serious problem"**, **to rate these issues. Please review the entire list before assigning your ratings.** (Please circle your ratings).

	Rating Scale					
	No Problem					Serious Problem
Little or no understanding of bank lending requirements	1	2	3	4	5	
No central source of information on access to financing	1	2	3	4	5	
Lack of sufficient review time with lending officer	1	2	3	4	5	
Only conventional and SBA loans available to small businesses	1	2	3	4	5	
Lack of competitive banking environment	1	2	3	4	5	

4.**The items listed below are possible strategies to improve firms' access to capital in El Paso. Given your experience**, use the five point scale ranging from **1 = "not at all helpful" to 5 = "extremely helpful"**, **to rate the value of these strategies to your firm. Please review the entire list before assigning your ratings.** (Please circle your ratings).

	Rating Scale					
	Not Helpful					Extremely Helpful
Educational outreach efforts by the banking community	1	2	3	4	5	
Greater sensitivity to minority lending needs	1	2	3	4	5	
Small business support programs (business planning, start-up counseling)		1	2	3	4	5
Access to information on bank lending criteria	1	2	3	4	5	
More conveniently located banks	1	2	3	4	5	
Outside evaluation of my business for potential access to alternative capital sources	1	2	3	4	5	
Knowledge about paid consultants in this area	1	2	3	4	5	
Training for myself and key employees about capital access	1	2	3	4	5	
Access to a pool of business owners who have been successful accessing capital	1	2	3	4	5	

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS
IMPORTANT COMMUNITY PROJECT

Public Policy Research Center
Benedict Hall, 103
El Paso, Texas 79968-0703

Marzo 3, 2000

Estimado Sr./Sra.:

En representacion del Consejo de Investigación y Liderazgo de El Paso, el Centro de Investigación de Política Pública en UTEP, está conduciendo la presente encuesta general sobre empresas del El Paso. Obtuvimos el nombre, dirección, y clasificación industrial de su empresa por medio de R.L. Polk Company, siendo su empresa elegida al azar de una lista proporcionada por ellos.

El propósito de esta encuesta es el de desglozar los servicios financieros y las fuentes que se utilizan en el sector empresarial de El Paso. También, deseamos conocer su opinión en cuanto a la diversificación de acceso a capital empresarial y otras situaciones que pudieran enfentar empresas de esta región. *La Universidad de Texas en El Paso fue elegida para conducir esta encuesta y mantener la* ***confidencialidad de información en cada empresa encuestada y asegurar su validez y calidad.*** *La participación de todas las empresas es necesaria para obtener un* ***perfil representativo de la comunidad. Esta será la oportunidad de expresarse en estos temas de suma importancia.***

Le pedimos de manera más atenta que el dueño o un representante de la empresa se tome el tiempo para contestar el cuestionario adjunto. El cuestionario es muy sencillo. No hay "buenas" o "malas" respuestas, ni "correctas" o "erróneas". Recibirá las versiones en inglés y en español de este cuestionario. Responda a cualquiera ya que las preguntas son idénticas. **Le tomará de 15 a 20 minutos completar el cuestionario.**

Para poder incluir sus respuestas en el perfil comunitario que se va a desarollar, le pedimos regrese el cuestionario por correo utilizando el sobre adjunto en los siguientes 10 días. Notará que hay un número impreso en las formas adjuntas. Por favor no lo remueva, sera utilizado para categorizar a las empresas durante nuestro analisis. Recuerde que **todos los cuestionarios son manejados con la máxima confidencialidad. Los resultados de la encuesta estarán disponibles al público para el mes de Mayo del 2000.** Si tiene alguna duda sobre esta encuesta, favor de contactar a David A. Schauer al teléfono (915) 757-7790.

Atentamente,

Dennis L. Soden, Ph.D
Director
Public Policy Research Center

David A. Schauer, Ph.D.
Associate Professor
Department of Economics and Finance

NO. DE CODIGO:_____
(No lo altere por favor)

CUESTIONARIO

I. Esta sección tiene como propósito obtener la información básica de su negocio.

1. ¿Cuál es la **constitución legal** o **estructura** de su negocio? (Marque una).

_____ Propietario único
_____ Sociedad
_____ Corporación del Subcapítulo S
_____ Otra Corporación

2. Estime el **monto de ventas brutas** durante 1999 o el año fiscal Más reciente. (Indique una).

_____ $24,999 o menos	_____ $250,000- $499,999	_____ $2,500,000-$3,499,999
_____ $25,000- $49,999	_____ $500,000- $749,999	_____ $3,500,000-$4,999,999
_____ $50,000- $99,999	_____ $750,000- $999,999	_____ $5,000,000 0 más
_____ $100,000-$249,999	_____ $1,000,000-$2,499,999	

3. Aproximadamente, ¿cuántos **empleados asalariados** (trabajando 20 horas o más por semana) tiene su negocio? (Indique uno).

_____9 o menos	_____30-49	_____100-149	_____250-349
_____10-19	_____50-69	_____150-199	_____350-499
_____20-29	_____70-99	_____200-249	_____500 o más

4. (A) **¿Cuánto tiempo** tiene su empresa proveyendo servicio a la región de El Paso, incluyendo **dueños actuales y anteriores?** (**Indique una**).

_____	Menos de un año	_____	7-9 años
_____	1-3 años	_____	10-15 años
_____	4-6 años	_____	Más de 15 años

(B) **¿Cuánto tiempo** tiene la empresa proveyendo servicio a la región de El Paso **con los dueños actuales?** (**Indique una**).

_____	Menos de un año	_____	7-9 años
_____	1-3 años	_____	10-15 años
_____	4-6 años	_____	Más de 15 años

5. (A) Considerando la forma de propiedad de éste negocio, ¿es clasificado como **negocio de minoría**? (es decir, si el 50% o más del negocio es propiedad de una(s) persona(s) étnicamente clasificada(s) como minoría étnica)

_____ Sí _____ No _____ No SABE

(B) **Si respondió "sí" a la pregunta anterior, cuál es la categoría étnica de la parte minoritaria**? (Marque una)

_____ Propiedad Hispana
_____ Propiedad Afroamericana
_____ Propiedad Nativa Americana
_____ Propiedad Asiática/Islas del Pacífico
_____ Otra

6. (A) **¿Hay algún individuo poseedor del 50% o más de esta empresa?**

_____ Sí _____ No _____ NO SABE

(B) **Si respondió "sí" a la pregunta anterior, el dueño mayoritario es:**

_____ Hombre _____ Mujer

7. ¿Hay un **solo miembro de la familia** (incluye hermanos, padres, tíos, primos y parientes políticos) que pose el 50% o más de la empresa?

_____ Sí _____ No _____ NO SABE

8. (A) **¿Exporta la empresa mercancías** fuera de los Estados Unidos?

_____ Sí _____ No _____ NO SABE

(B) **Si respondió "sí" a la pregunta anterior, qué porcentaje** de ventas provienen de fuera de los Estados Unidos?

_____ Menos del 10% _____ 25-49%
_____ 10-24% _____ 50% o más

9. Generalmente las empresas mantienen un **archivo financiero** para conocer el desempeño de su empresa durante el año. Sin embargo, el tiempo, esfuerzo, y recursos dirigidos al mantenimiento de este archivo varía significativamente de una empresa a otra. Por favor, indique el **sistema contable/financiero que más se aproxime al utilizado en su empresa.** (Indique uno)

_____ Guarda los recibos y/o documentos de ingresos y egresos hasta fin de año para declaración de impuestos.
_____ Mantiene datos que puedan brindar información para generar una hoja de balance y estado de resultados junto con información tributaria (impuestos) cada fin de año.
_____ Cuenta con un sistema que genera información tributaria (impuestos) y estados financieros trimestral (cada tres meses) y anualmente.
_____ Utiliza un sistema que le proporciona información tributaria (impuestos) y estados financieros mensual, trimestral (cada tres meses) y anualmente.

Por favor conteste la siguiente pregunta **si el negocio comenzó con o fue adquirido por los dueños actuales durante 1997 o después.** Si este no es el caso, pase a la sección II.

10. **Cómo fueron financiados los costos de inicio o de adquisición?** Estime el porcentaje de financiamiento correspondiente a cada categoría. (Escriba un número del 0 al 100% en cada una de las líneas de abajo).

_____ Fondos propios del dueño(s).
_____ Préstamo de familia/parientes/amigos.
_____ Préstamo de un Banco Comercial.
_____ Préstamo de cualquier otra institución prestamista.

El total de las cuatro opciones anteriores debe ser igual al 100%.

II. Esta sección del cuestionario identifica los servicios y productos financieros utilizados por su negocio, junto con las fuentes de estos servicios/productos financieros. **Seleccione con un círculo "S=Sí" para aquellos servicios que su empresa ha utilizado durante 1997 a la fecha, "N=No" para los servicios que su empresa no haya utilizado, o "NS=No Sabe" si no está seguro.** Nota: muchos negocios utilizan cuentas de cheques personales, tarjetas de crédito personales, préstamos personales, prestamos de vivienda, etc. **con fines personales y empresariales a la vez. Si este es su caso, seleccione "S=Sí"** para los servicios o productos apropiados. **Luego, identifique con la letra el recurso del producto o servicio utilizado por su negocio de la siguiente lista.** Por ejemplo, si su negocio tiene una "Cuenta de cheques" en un "Banco Comercial en el Condado de El Paso", marcará la "S" en la columna de servicios y pondrá la letra "a" en la columna del proveedor del producto/servicio.

(a) Banco Comercial del Condado de El Paso
(b) Otro Banco Comercial (fuera de El Paso)
(c) Ahorros y Préstamo
(d) Unión de Crédito
(e) Compañía Financiera
(f) Empresa de Bolsa
(g) Empresa Arrendadora
(h) Banco Hipotecario o Vivienda
(i) Empresa de Factoraje
(j) Compañía de Tarjetas de Crédito
(k) Empresa de Capital de Riesgo
(l) Small Business Administration (SBA)
(m) Otra Agencia Gubernamental
(n) Familia/parientes/amigos
(o) Otra Institución

Servicio **Indique el**

1. **Producto/Servicio**	**Sí – No – No Sabe**	**proveedor del producto/servicio**
Cuenta Personal de cheques	S --- N --- NS	_____
Cuenta Empresarial de cheques	S --- N --- NS	_____
Certificados de Depósito	S --- N --- NS	_____
Tarjeta de Crédito Personal	S --- N --- NS	_____
Tarjeta de Crédito Empresarial	S --- N --- NS	_____
Préstamo Empresarial a corto plazo (Menos de un año)/Línea de Crédito	S --- N --- NS	_____
Préstamo Personal	S --- N --- NS	_____
Préstamo Comercial de Bienes Raíces	S --- N --- NS	_____
Préstamo de Vivienda	S --- N --- NS	_____
Préstamo para Equipo	S --- N --- NS	_____
Préstamo para Vehículo	S --- N --- NS	_____
Arrendamiento de Vehículo/Equipo	S --- N --- NS	_____
Crédito de Proveedores	S --- N --- NS	_____
Facturación de Cuentas por Cobrar	S --- N --- NS	_____

2. A continuación se muestra una lista de las Instituciones Financieras de El Paso. Si obtuvo **una cuenta/préstamo empresarial (o cuenta/préstamo personal utilizado con fines de empresariales) durante 1997 a la fecha en alguna de las siguientes instituciones, indíquelo marcando todas las que apliquen.** Enseguida, **encierre el nombre de su institución financiera actual.**

_____ Bank of America (antes Nations Bank/Sunwest)
_____ Bank of the West
_____ Chase Bank of Texas (antes Texas Commerce Bank)
_____ First National Bank of Fabens (incluye los anteriores bancos de Bank of Ysleta y Bank of El Paso)
_____ Norwest Bank/Wells Fargo
_____ State National Bank (antes Montwood National Bank, Bank CNB/Continental National Bank y Valley Bank)
_____ Unión de Crédito
_____ Casa de Bolsa
_____ Compañía Financiera
_____ Compañía Arrendadora
_____ Otro Banco Comercial
_____ Otra Institución Financiera
_____ Ninguna

3. (A) **Ha solicitado su empresa algún préstamo de un banco comercial en la región de El Paso** durante 1997 a la fecha?

_____ Sí _____ No _____ NO SABE

(B) Si contestó **"Sí"**, marque el tipo(s) de préstamo solicitado y encierre "A" o "N" para indicar si su solicitud fue aprobada o negada. **Si contestó "No"**, pase a la parte (C). Nota: si solicitó el préstamo(s) a una o varias instituciones y **recibió** el préstamo, favor de encerrar "A" en los préstamos que apliquen.

Tipo de Préstamo Solicitado	**Aprobado/Negado**	
_____ Línea de Crédito	A	N
_____ Capital de Trabajo	A	N
_____ Préstamo Vehicular con fines empresariales (hasta cierto punto)	A	N
_____ Préstamo de Equipo	A	N
_____ Préstamo Hipotecario para fines empresariales	A	N
_____ Préstamo para Terreno y Edificio	A	N
_____ Préstamo para Inicio de Actividades	A	N
_____ Prestamos para Adquisición del Negocio	A	N
_____ Otro (especifique) _____	A	N

(C) **Si solicitó un préstamo a un banco comercial de la localidad y le fue**

negado (indique **todos** los que apliquen)

_____ acudió a un segundo banco comercial dentro de la región para solicitar financiamiento
_____ acudió a un tercer banco comercial dentro de la región para solicitar financiamiento
_____ acudió a otra institución financiera para solicitar los fondos requeridos

(D) **Si respondió "No" a la parte 3(A)**, señale la razón. (Indique sólo una).

_____ No necesitaba financiamiento
_____ Obtuvo el financiamiento requerido en otra institución financiera fuera de la localidad
_____ Otra (especifique)_____

4. De acuerdo a las siguientes **entidades de apoyo empresarial**, indique aquellos que su empresa ha utilizado desde 1997 a la fecha (indique todos los que apliquen).

_____ El Paso Black Chamber of Commerce
_____ El Paso Hispanic Chamber of Commerce
_____ Greater El Paso Chamber of Commerce
_____ Service Corps of Retired Executives (SCORE)
_____ Small Business Administration (SBA)
_____ Small Business Development Center (SBDC) at El Paso Community College
_____ UTEP's Family Business Forum
_____ UTEP's Franchise Center
_____ UTEP's Texas Centers for Border Economic Development
_____ Empresa Contable
_____ Empresa Legal

III. Esta sección de la encuesta busca conocer su **opinión o preocupación con respecto a temas/circunstancias generales o específicas que enfrentan las empresas en la actualidad.**

1. Utilizando una escala de 1 a 5, donde **1="sin importancia"** y **5= "extremadamente importante"**, califique la importancia de cada uno de los **siguientes factores** en su empresa al comienzo del año 2000. **Revise la lista completa antes de asignar un número.** (Encierre las opciones).

	Escala				
	Sin importancia ------- Extremadamente importante				
Impuestos	1	2	3	4	5
Malas Ventas	1	2	3	4	5
Financiamientos y respectivos intereses	1	2	3	4	5
Costos de Operación y Producción	1	2	3	4	5
Burocracia y regulaciones gubernamentales	1	2	3	4	5
Oferta y Calidad de Trabajo	1	2	3	4	5
Costos de Seguros	1	2	3	4	5
Otro (especifique) _____	1	2	3	4	5

2. Utilizando una escala de 1 a 5, donde **1="sin importancia"** y **5= "extremadamente importante"**, califique la importancia o seriedad de cada uno de los **siguientes factores** para su empresa al comienzo del año 2000. **Revise la lista completa antes de asignar número.** (Encierre las opciones).

	Escala				
	Sin importancia ------- Extremadamente importante				
Competir efectivamente con empresas más grandes	1	2	3	4	5
Regulaciones Ambientales	1	2	3	4	5
Obtención de fondos para adquirir una empresa	1	2	3	4	5
Costo de materiales y mano de obra	1	2	3	4	5
Regulaciones de Occupational Safety y Health (OSHA)	1	2	3	4	5

Obtención de financiamiento para terrenos e inmuebles	1	2	3	4	5
Desarrollo y mantenimiento de una fuerza laboral de alta calidad	1	2	3	4	5
Procesos para adquisición de licencias/permisos	1	2	3	4	5
Obtención de financiamiento para maquinaria, equipo o vehículos	1	2	3	4	5
Adquisición de alta tecnología y equipo	1	2	3	4	5
Impuestos estatales y locales	1	2	3	4	5
Obtención de capital de trabajo/ financiamientos a corto plazo	1	2	3	4	5
Proyección de la demanda (ventas) del producto o servicio	1	2	3	4	5
Costos de compensación a los obreros	1	2	3	4	5
Obtención de fondos para iniciar una empresa	1	2	3	4	5
Otro (especifique) _____	1	2	3	4	5

3. **Los siguientes factores son posibles "barreras" para obtener financiamiento en El Paso. Dada su experiencia** y utilizando una escala 1 a 5, donde **1="no es problema"** y **5="grave problema"**, **califique los siguientes factores. Revise completamente la lista antes de asignar un número.** (Encierre las opciones).

	Escala				
	No es problema ---------- Grave problema				
Poco o ningún conocimiento de requerimientos bancarios	1	2	3	4	5
El deficiente acceso a fuentes centrales de información sobre financiamientos	1	2	3	4	5
Falta del tiempo adecuado para revisión con el funcionario bancario	1	2	3	4	5
Sólo préstamos convencionales y prestamos del SBA disponibles para pequeños comerciantes	1	2	3	4	5
Falta de un sistema competitivo bancario	1	2	3	4	5

4. **A continuación se muestra una lista de posibles estrategias para mejorar el acceso a empresas de capital en El Paso. Dada su experiencia** y utilizando una escala de 5 donde **1="no es útil" a 5="extremádamente útil", califique el valor que tienen las siguientes estrategias en su empresa. Revise toda la lista antes de asignar su número.** (Encierre las opciones).

	Escala					
	No es útil ---------- Extremadamente útil					
Esfuerzos en el área de educación bancaria a la comunidad	1	2	3	4	5	
Mayor sensatez a las necesidades de minorías	1	2	3	4	5	
Programas de apoyo a empresas pequeñas (Planeación de negocios, consultoría para iniciar negocios)	1	2	3	4	5	
Acceso a información de criterios bancarios	1	2	3	4	5	
Bancos con localización conveniente	1	2	3	4	5	
Abrir mi negocio a una evaluacion exterena paratener acceso potential a fuentes alternatives de capital		1	2	3	4	5
Conoccimiento sobre consultoria pagada en el area	1	2	3	4	5	
Entrenamiento para mi y para mis empleados sobre acceso a capital	1	2	3	4	5	
Acceso a un grupo de dueños de negocios que han enido éxito para adquirir capital	1	2	3	4	5	

MUCHAS GRACIAS POR PARTICIPAR EN ESTE IMPORTANTE PROYECTO

APPENDIX B

Assessment of Non-Response Bias

The original, Wave I mail survey generated 1398 usable responses; a return rate of 10.3 percent. Given the length and detail of the questionnaire, this is not an unexpected result in our experience. Nevertheless, almost 90 percent of the firms receiving the survey instrument did not respond, raising the issue of a non-response bias in the current study. Such a possibility is always present in mail surveys. Specifically, given the number and percent of firms who did not respond, does this fact introduce any bias to the data and implications derived from the responding firms? That is, do the results reported in this study misrepresent the true experiences and opinions of the El Paso business sector? Alternatively, if we could generate additional data from the non-respondents to Wave I, would this new information vary significantly from the information provided by the group of firms who did respond to the original mail-out?

As noted earlier, this project included a follow-up survey of firms who did not respond to the first wave mailing. The purposes of this second wave survey were: 1) to insure the overall survey response group (Wave I plus Wave II) was representative of the El Paso business sector; 2) to provide data relating to any non-response bias in the original survey.

Readers should appreciate that the first objective of the follow-up survey was to increase the probability that the overall response group does represent the general business population in El Paso. In other words, this reduces the possibility of a non-response bias. Further, recall that the number of industry groups was condensed from an original 70-plus, two-digit SIC number of categories. This facilitated analysis and also increased the number of responses in each industry cell. As a result, the representativeness of the response group was improved; that is, the non-response bias probability was managed. In addition, the responses from the second wage survey were combined with the initial group of firms. Thus, to the extent that a non-response bias exists, by combining the two respondent groups we "smooth" or average out the potential problem.

In the Wave II mail-out, a sample of 4,065 firms received the survey instrument. Ultimately, 233 usable responses were obtained; a 5.7 percent response rate. As is typical, the response rate was approximately 50 percent of the Wave 1 mailing. This second group did assist in generating a reasonable overall response rate of 12.1 percent and led to obtaining a representative picture of the El Paso business sector. Further, the characteristics, experiences and opinions of the respondent firms in Wave II are highly similar to those revealed by the Wave I survey. As detailed in Tables B-1 through B-14, Wave I characteristics and Wave I and II comparisons are as follows:

As shown in Tables B-1 and B-2, the distribution of the Wave I response group by geographical area and industry category shows no significantly different pattern relative to the population data.

Tables B-3 through B-9 reveal that there are no significant differences between Wave 1 and Wave 2 response groups by:

- -- geographical distribution
- -- legal form of business
- -- size of firm as measured by annual revenues and number of employees
- -- age of firm since inception and under current owner
- -- minority ownership
- -- gender of owner
- -- single family ownership
- -- type/level of record keeping system utilized
- -- incidence of loan application, accept/reject rates, and other lending experiences

Table B-10 shows the same low level of Business Support Services used over the past three years.

Tables B-11 through B-14 review attitudes concerning General and Specific Issues, Potential Barriers, and Possible Strategies, indicating relatively few statistically significant differences between Wave 1 and Wave 2 firms.

In general, however, Wave II respondents are "less concerned" or show a higher level of "indifference" compared to Wave 1, not unexpected in mail surveys where interest in the topic sometimes motivates respondents. Further, by summing Wave I and II groups, we do accomplish a "smoothing" or "averaging"

effect, which, if carried out to the entire population might conceivably reduce those firms with the greatest need as a percentage of the whole.

TABLE B-1
WAVE I RESPONSE GROUP: GEOGRAPHICAL DISTRIBUTION RELATIVE TO BUSINESS FIRM POPULATION[1]
WAVE I

AREA	POPULATION (%)	RESPONSE GROUP (%)
North East	9.3	7.4
North Central	16.1	20.4
West	16.0	18.1
South Central	13.1	13.4
Riverside	16.3	14.2
East	29.1	26.5

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-2
WAVE I RESPONSE GROUP: INDUSTRY DISTRIBUTION RELATIVE TO BUSINESS FIRM POPULATION AND COUNTY BUSINESS PATTERNS (CBP)[1]

	INDUSTRY CATEGORY	POPULATION (%)	CBP (%)	RESPONSE GROUP (%)
1.	Agriculture	1.4	1.0	2.0
2.	Business Services	9.6	8.4	5.6
3.	Distribution/Transportation	6.6	9.3	7.8
4.	Construction	8.5	7.5	9.6
5.	Finance/Insur/Real Estate	6.4	9.1	8.3
6.	Health	5.8	7.4	7.6
7.	Other Services	10.7	8.2	3.1
8.	Manufacturing	10.0	4.6	18.2
9.	Retail - Other	19.5	14.2	13.4
10.	Retail - Food	7.3	10.7	6.2
11.	Wholesale Trade	6.5	9.1	3.2
12.	All Other	7.7	10.6	15.0

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-3
GEOGRAPHICAL DISTRIBUTION[1]

AREA	WAVE I (%)	WAVE II (%)
North East	7.4	9.9
North Central	20.4	15.0
West	18.1	13.3
South Central	13.4	16.3
Riverside	14.2	16.3
East	26.5	29.2

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-4
LEGAL FORM OF BUSINESS[1]

LEGAL FORM	WAVE I (%)	WAVE II (%)
Sole Proprietorship	43.2	49.3
Sub-Chapter S Corporation	20.4	17.6
Partnership	7.4	9.7
Other Corporation	29.1	23.3

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-5
SIZE OF FIRM[1]

1999 GROSS REVENUES	WAVE I (%)	WAVE II (%)
Less Than $100 k	25.9	30.5
$100 k - $499 k	31.8	33.2
$500 k - $2,499 k	25.6	23.3
$2,500 k - $4,999 k	6.4	4.0
$5,000 k or More	10.3	9.0
PAID EMPLOYEES		
Less Than 10	68.9	74.0
10 - 99	25.5	19.4
100 - 499	4.4	4.4
500 or More	1.2	2.2

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-6
AGE OF FIRM[1]

AGE SINCE INCEPTION	WAVE I (%)	WAVE II (%)
3 Years or Less	12.0	12.6
4 - 9 Years	21.0	19.9
10 - 15 Years	18.0	21.2
More Than 15 Years	49.1	46.3
AGE UNDER PRESENT OWNER(S)		
3 Years or Less	17.1	18.1
4 - 9 Years	24.1	24.1
10 - 15 Years	18.9	21.1
More Than 15 Years	39.9	36.6

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-7
OWNERSHIP[1]

OWNERSHIP CATEGORY	WAVE I (%)	WAVE II (%)
50 Percent or More of Firm Minority-Owned	53.6	56.5
Gender of Individual Owning 50 Percent or More of Firm		
Male	74.9	74.3
Female	25.1	25.7
50 Percent or More of Firm Owned by Single Family	69.3	63.6

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-8
RECORD KEEPING[1]

LEVEL OF RECORD KEEPING	WAVE I (%)	WAVE II (%)
Keep expense and revenue receipts compiled at year-end	23.8	31.6

1. No significant difference in distributions at the 99 percent confidence level

TABLE B-9
LOAN EXPERIENCE WITH LOCAL COMMERCIAL BANKS[1]

	WAVE I (%)	WAGE II (%)
% of Firms Applying for Loans Over 1997 to Present Period	40.6	32.7
% Acceptance Rate of Loan Applications: Overall	69.4	81.1
% Acceptance Rate of Loan Applications: Category/Type		
Line of Credit	71.8	68.2
Working Capital	46.9	36.0
Vehicle	89.1	73.7
Equipment	72.1	75.0
Business Mortgage	72.5	71.0
Land and Building	71.7	60.0
Loan to Start-Up Business	53.8	83.3
Loan to Acquire Business	48.4	50.0
Other Loan	49.1	25.0
Reason for No Loan Application at Local Commercial Banks over 1997-Present		
Did Not Require Financing	67.8	73.1
Obtained Financing From Institution Other Than Local Bank	17.6	15.1
Other	14.6	11.8

1. No significant difference in distributions at the 99 percent confidence level.

TABLE B-10
BUSINESS SUPPORT SERVICES USED OVER 1997-PRESENT[1]

UTILIZED (%) SERVICE	WAVE I	WAVE II
El Paso Black Chamber of Commerce	2.3	3.0
El Paso Hispanic Chamber of Commerce	9.7	17.2
Greater El Paso Chamber of Commerce	18.9	12.4
Service Corps of Retired Executives (SCORE)	2.9	1.3
Small Business Administration (SBA)	12.2	11.2
Small Business Development Center (SBDC) at El Paso Community College	6.3	3.9
UTEP's Family Business Forum	2.3	4.3
UTEP's Franchise Center	0.7	1.7
UTEP's Texas Centers for Border Economic Economic Development	1.7	3.9
Other UTEP Resources	3.9	13.7
Accounting Firm	49.0	32.6
Law Firm	39.2	15.9

Some Cells Of Insufficient Size For Significance Test

TABLE B-11
GENERAL ISSUES FACED BY FIRM AT START OF 2000[1]

	RATINGS (%) BY WAVE I/II									
	1---------- 2----------3----------4----------5									
ISSUE	I	II	I	II	I	II	I	II	I	II
Taxes *	4.1	11.8	3.6	7.5	14.5	14.4	19.3	18.7	58.5	47.6
Poor Sales	8.6	8.3	7.5	11.3	15.8	14.3	14.0	22.6	54.1	43.5
Financing and Interest Rates	14.1	13.2	10.7	9.9	23.6	18.4	19.9	17.9	31.7	40.6
Operating and Production Costs	7.0	8.3	6.5	8.3	18.5	23.5	22.8	16.7	45.2	43.1
Government Regulations/Red Tape	8.1	14.1	9.0	10.2	18.0	21.4	22.3	18.4	42.6	35.9
Availability and Quality of Labor	10.3	13.6	8.9	8.7	16.9	19.4	22.6	22.3	41.3	35.9
Cost of Insurance *	6.7	14.8	8.6	11.1	20.4	19.1	22.7	24.7	41.7	30.2

[1] "5" = Extremely Important to "1" = Not Important At All

- Significant Difference at 1 Percent Level

TABLE B-12
SPECIFIC ISSUES FACED BY FIRM AT START OF 2000[1]

	RATINGS (%) BY WAVE I/II									
	1---------- 2----------3----------4----------5									
ISSUE	I	II	I	II	I	II	I	II	I	II
Market/Supply/Demand Conditions										
Competing effectively with larger firms	13.6	18.6	10.3	10.9	20.3	24.5	20.6	21.4	35.1	24.5
Costs of labor and materials*	9.1	19.1	7.4	10.9	21.7	24.1	26.6	18.6	35.3	27.3
Developing and maintaining a quality labor force*	12.6	18.7	8.0	11.0	16.9	25.1	23.2	13.7	39.4	31.5
Acquiring key technology and equipment	19.4	20.8	12.7	13.4	22.9	19.9	23.0	20.4	22.0	25.5
Outlook for demand (sales)* of my product or service	6.9	10.6	4.5	7.4	12.5	18.5	23.7	19.4	52.4	44.0
Regulations/Taxes										
Environmental regulations	23.9	32.6	16.7	14.0	23.8	18.0	16.0	12.9	19.6	22.5
Occupational Safety and Health Act (OSHA)*	19.6	30.3	15.9	15.8	23.1	16.7	17.7	15.4	23.7	21.7
Process for acquiring licenses/permits*	21.0	31.7	16.2	18.3	23.7	19.3	17.8	14.2	21.3	16.5
State and local taxes*	7.8	18.9	7.4	13.8	18.6	14.7	23.6	22.6	42.6	30.0
Financing										
Obtaining funds to acquire a business	37.1	31.7	16.2	10.9	15.9	16.3	12.7	18.1	18.0	23.1
Obtaining financing for land and buildings	37.4	31.5	15.6	14.2	17.5	14.2	12.8	14.2	16.8	26.0
Obtaining financing for machinery, equipment and vehicles	31.4	29.2	16.6	11.0	21.2	18.7	14.0	16.4	16.9	24.7
Obtaining short-term/working capital financing	24.9	25.8	14.1	13.8	18.9	16.1	16.7	16.6	25.5	27.6
Obtaining funds to start-up a business	46.7	35.3	14.4	9.4	13.4	17.6	8.9	13.5	16.5	24.1

[1] "5" = Extremely Important to "1" = Not Important At All

* Significant Difference at 1 Percent Level

TABLE B-13
POTENTIAL "BARRIERS" TO OBTAINING FINANCING[1]
RATINGS (%) BY WAVE I/II*

	1		2		3		4		5	
ISSUE	I	II	I	II	I	II	I	II	I	II
Little or no understanding of bank lending requirements	36.4	39.4	13.1	14.1	20.9	21.2	13.9	11.1	15.7	13.9
No central source of information on access to financing	30.5	32.5	13.3	9.0	22.6	29.5	16.5	15.7	17.2	13.3
Lack of sufficient review time with lending officer	32.3	33.3	15.2	10.4	23.9	22.4	13.4	16.9	15.1	16.9
Only conventional and SBA loans available to small businesses	31.8	27.2	11.8	9.9	19.4	22.8	14.7	16.3	22.3	23.8
Lack of competitive banking environment	25.2	29.3	10.3	10.1	17.9	22.7	15.7	14.1	30.9	23.7

[1] "1" = Not A Problem At All to "5" = A Serious Problem
* No Significant Difference at 1 Percent Level

TABLE B-14
POTENTIAL "STRATEGIES" TO IMPROVE FIRMS' ACCESS TO CAPITAL IN EL PASO[1]
RATINGS (%) BY WAVE I/II

	1		2		3		4		5	
ISSUE	I	II	I	II	I	II	I	II	I	II
Educational outreach efforts by the banking community	22.5	30.8	14.8	13.9	27.4	23.9	16.5	10.0	18.8	21.4
Greater sensitivity to minority lending needs	26.1	30.2	15.2	11.9	23.0	21.3	13.8	12.9	21.9	23.8
Small business support programs (business planning, start-up counseling)	18.8	25.5	12.6	11.2	23.7	25.5	20.5	15.3	24.4	22.4
Access to information on bank lending criteria*	15.8	26.8	12.5	15.2	22.7	21.2	24.0	16.7	25.1	20.2
More conveniently located banks	27.5	28.2	17.4	13.8	28.1	25.6	12.6	16.4	14.3	15.9
Outside evaluation of my business for potential access to alternative capital sources	22.2	26.9	15.3	16.1	29.4	28.0	16.9	14.5	16.2	14.5
Knowledge about paid consultants in area	28.6	29.1	19.4	17.9	29.1	28.6	11.4	9.2	11.4	15.3
Training for myself and key employees about capital access	24.2	27.0	16.4	14.8	26.8	25.0	18.1	13.8	14.6	19.4
Access to a pool of business owners who have been successful in accessing capital*	24.3	48.5	14.1	12.3	25.5	14.7	17.9	13.2	18.2	11.3

[1] "1" = Not At All Helpful to "5" = Extremely Helpful
* Significant Difference at 1 Percent Level

In conclusion, while there is no definitive test(s) for assessing a non-response bias hypothesis, we believe the data generated in survey and reported here is representative of the El Paso business Population in all probability. If there is a bias, it would be that the opinions/concerns expressed by the firms sampled are somewhat over-stated. In a strict technical sense, though, the response bias hypothesis cannot be accepted or rejected.

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